

Lab Assignment



Cybersecurity Professional Program

Introduction to Python
for Security

Introduction to Programming

PY-01-L2

Comments & Print

Lab Objective

Learn how to write a program that prints messages to the screen.

Lab Mission

Use Python to build your first program that will print a string to the console.

Lab Duration

10–15 minutes

Requirements

- Basic knowledge of PyCharm

Resources

- Environment and tools
 - Windows
 - Python 3
 - PyCharm

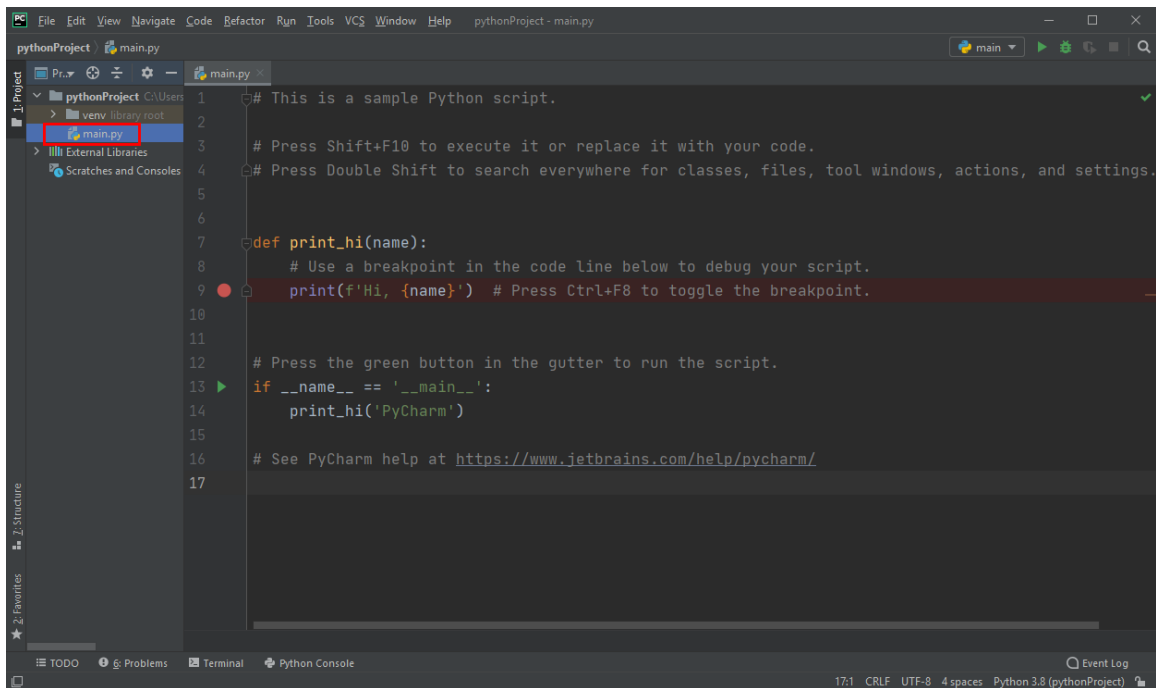
Textbook References

- Chapter 1: Introduction to Programming
 - Section 4: Python Environment and PyCharm
 - Section 5: Basic Syntax

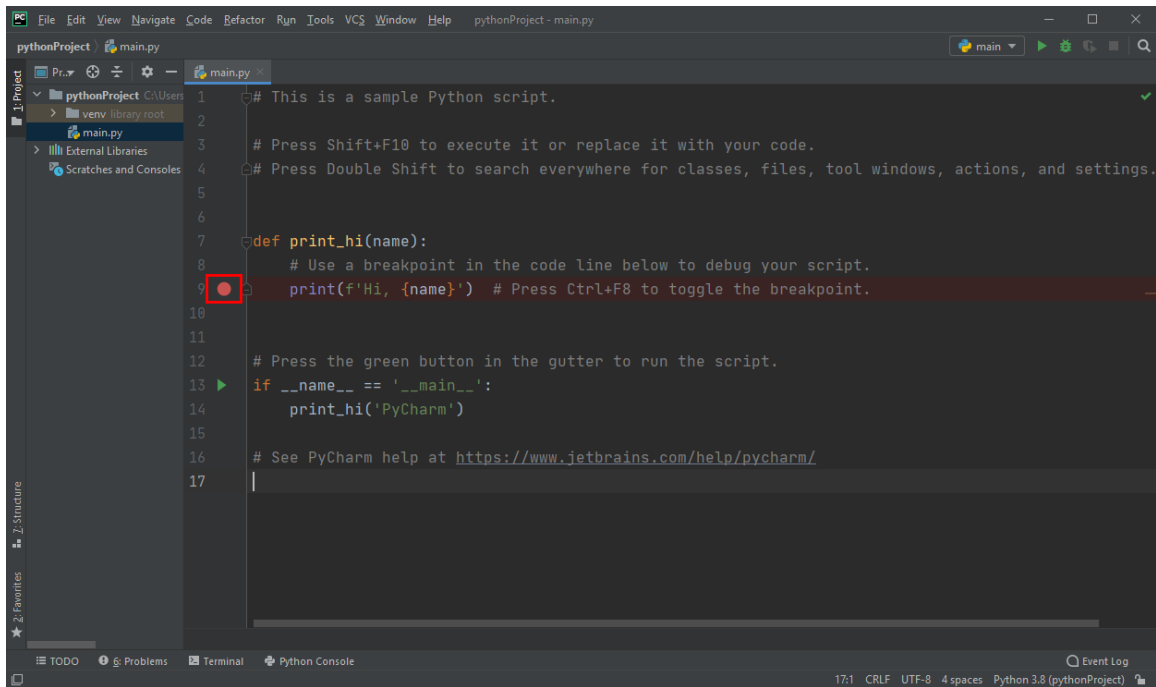
Lab Task 1: Become Familiar with Python Code

In the following task, you will experiment with the ***main.py*** file created by PyCharm.

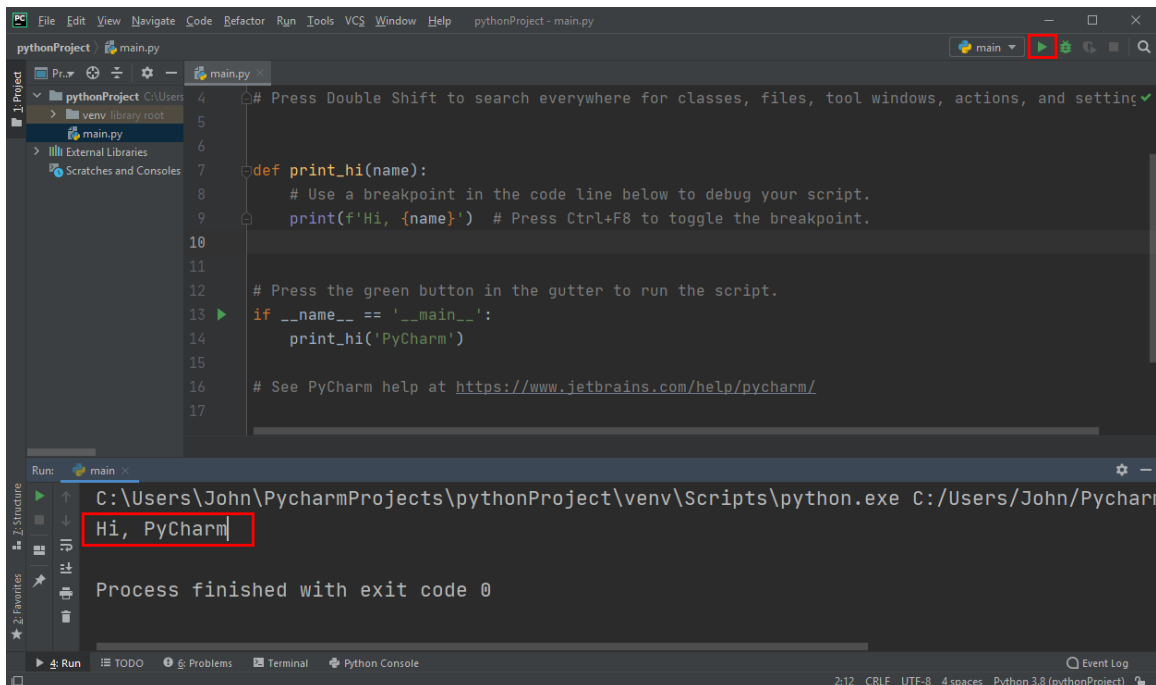
- 1 In PyCharm, click the ***main.py*** file to display it.



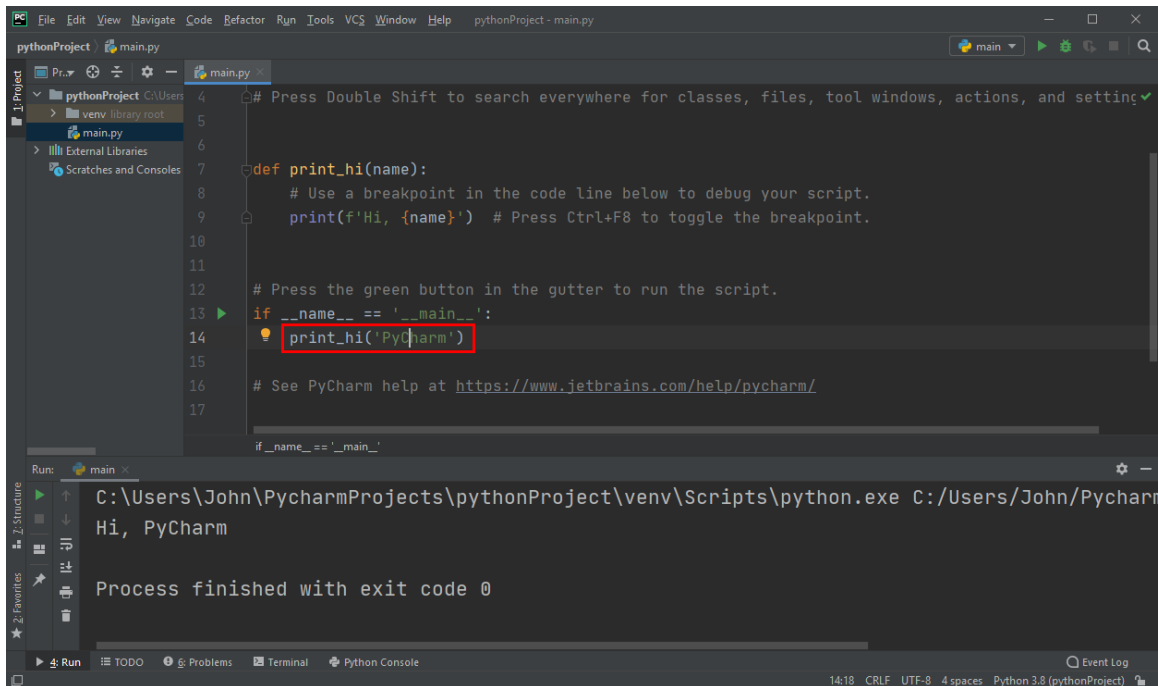
- 2 Click the red dot on line 9 to remove it (it is related to code debugging, which is not covered in the course).



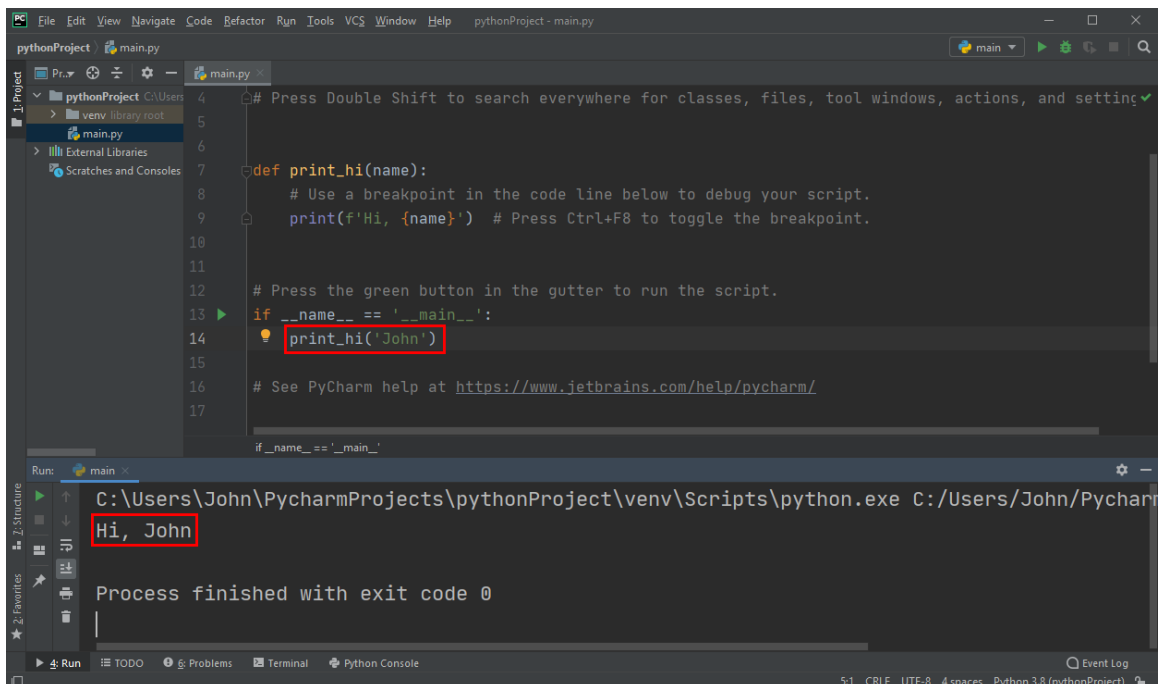
- 3 Execute the script by clicking the green arrow at the top left corner of the window. Note that the result of the execution is the text **Hi, PyCharm**.



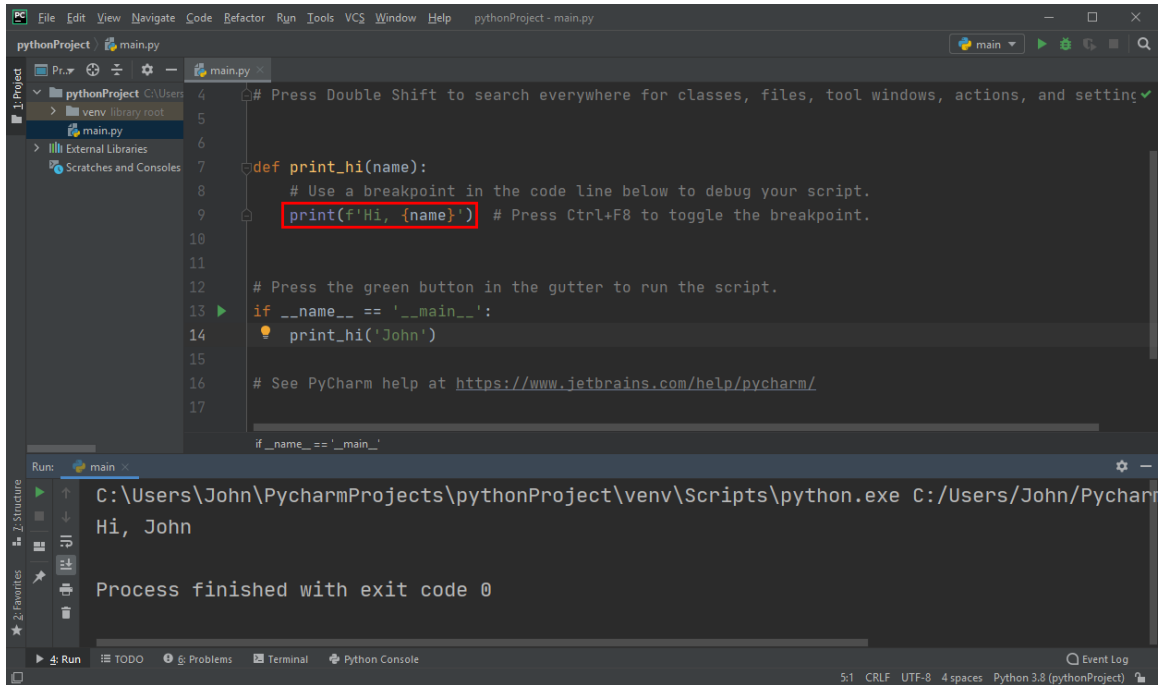
- 4 In the file, locate the word **PyCharm** and change it to your name.



- 5 Run the file again, and note that the output this time is your name.



- 6 Note that the word **Hi** is not in the same line as the name. Locate the word **Hi** in the file command that prints the text.



The screenshot shows the PyCharm IDE interface. The main editor window displays a Python file named `main.py` with the following code:

```
4 # Press Double Shift to search everywhere for classes, files, tool windows, actions, and settings
5
6
7 def print_hi(name):
8     # Use a breakpoint in the code line below to debug your script.
9     print(f'Hi, {name}') # Press Ctrl+F8 to toggle the breakpoint.
10
11
12 # Press the green button in the gutter to run the script.
13 if __name__ == '__main__':
14     print_hi('John')
15
16 # See PyCharm help at https://www.jetbrains.com/help/pycharm/
17
```

The `print(f'Hi, {name}')` line is highlighted with a red box. The `Hi` string is not on the same line as the variable `name`.

Below the editor, the Run window shows the execution output:

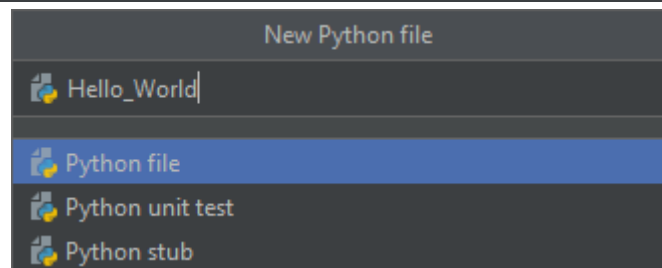
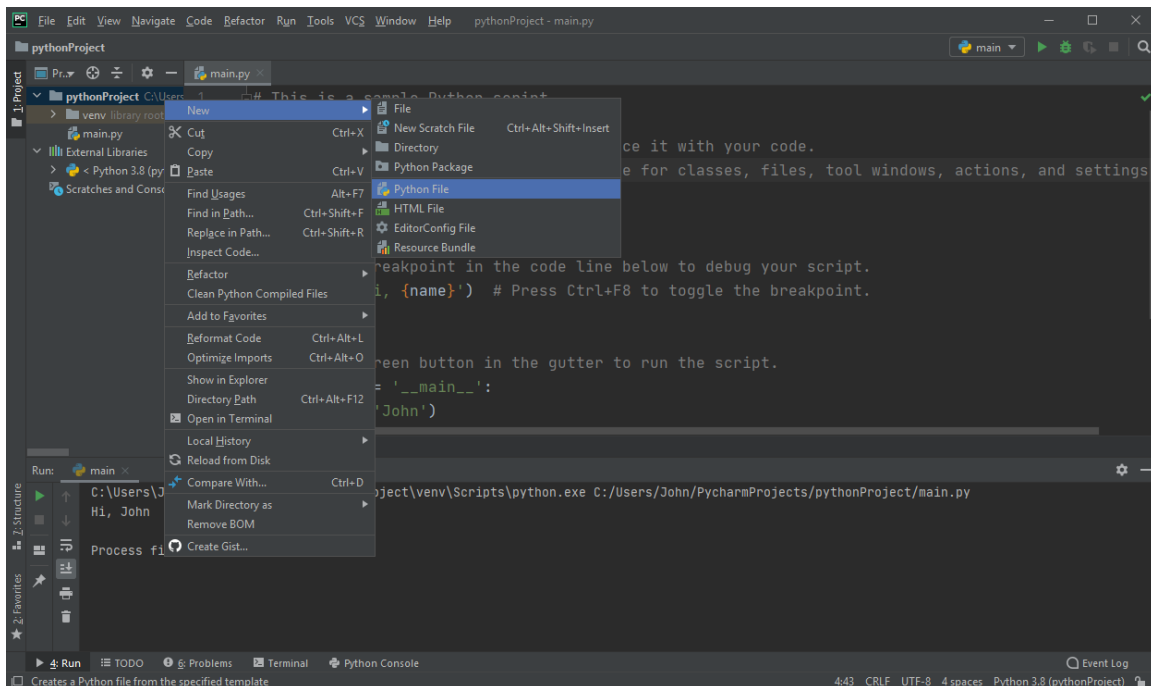
```
C:\Users\John\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/John/Pycharm
Hi, John
Process finished with exit code 0
```

- 7 Think about the script's execution path. What do you think happens there?

Lab Task 2: Hello World!

In the following task, you will write your first lines of code, learn to use comments, and receive an output.

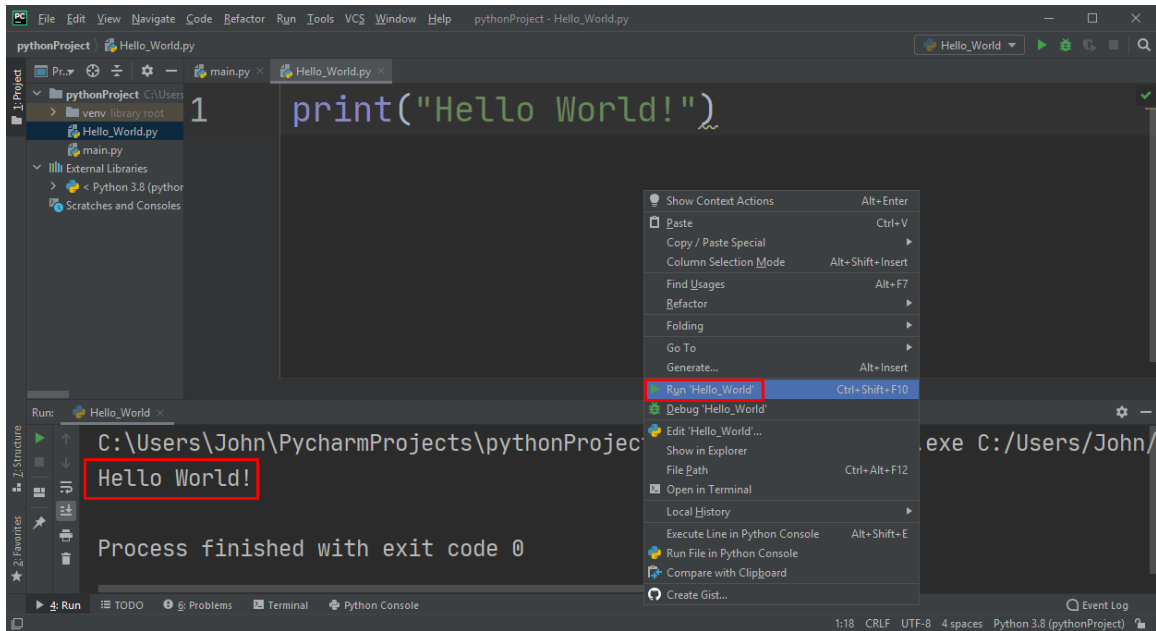
- 1 Create a new Python file and name it ***Hello_World***.



- 2 Write a command to print the text ***Hello World!*** using the ***print("Hello World!")*** function.

```
print("Hello World!")
```

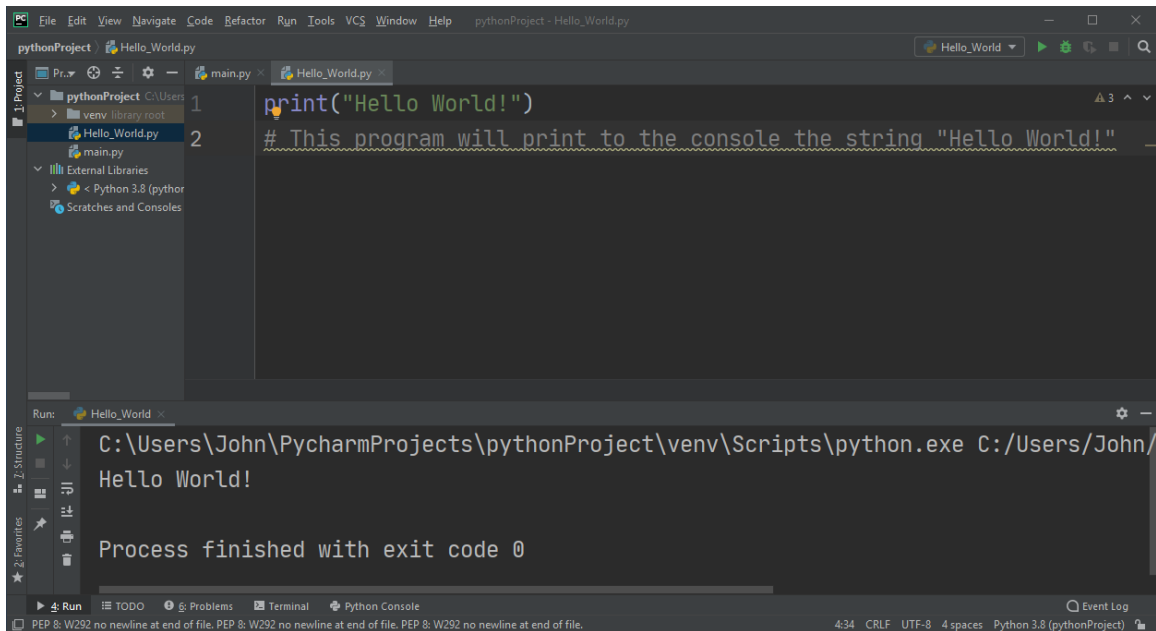
- 3 Run the script by clicking the green arrow. Note that the output does not match the content of the file. What do you think happened?
- 4 To make PyCharm execute the currently viewed file, right-click its content and select **Run 'Hello_World'**.



- 5 Add a comment to the code using `#` with the following text after it:
This program will print to the console the string "Hello World!"

```
print("Hello World!")  
# This program will print to the console the string "Hello  
World!"
```


- 6 Execute the file again and note that the content of the comment does not affect the output.



The screenshot shows the PyCharm IDE interface. The main editor window displays a Python file named `Hello_World.py` with the following code:

```
1 print("Hello World!")
2 # This program will print to the console the string "Hello World!"
```

The left sidebar shows the project structure with `pythonProject` as the root, containing `venv` and `main.py`. The bottom panel shows the Run console output:

```
C:\Users\John\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/John/
Hello World!

Process finished with exit code 0
```

The status bar at the bottom indicates the file encoding is UTF-8, line endings are CRLF, and it uses 4 spaces for indentation.

- 7 What are comments used for when writing scripts and programs?
- 8 Create a new file in the project and write a line of code to print the text *I'm a Programmer*. Use three quotation marks (`""" text """`) to describe how to create a new Python file, and run it using **Ctrl + Shift + F10**.